

A new species of Buccinidae from the Philippine Islands

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ABSTRACT. The buccinid species *Paratetifusus dedonderi* n.sp. is described from 120-500 m in the central Philippines. This new species is tentatively placed in the genus *Paratetifusus* Kosuge, 1967 because of similarities in radular morphology. The presence of strong axial sculpture, as well as radular morphology, serve to distinguish this new species from *Paratetifusus tenuis* (Okutani, 1966), the species to which it is most similar. Protoconch, radula, shell size and range, serve to distinguish this new species from *Americominella duartei* Klappenbach & Ureta, 1972.

INTRODUCTION

Because small shells are often overlooked during commercial fisheries or by dealers, a number of shell collectors made big efforts to collect large quantities of small shells and shell grit with good locality data. A number of interesting shells, some new to science, are represented in this rich material. *Paratetifusus dedonderi* n.sp. described herein is one of them.

Indo-Pacific deep water buccinids show a wide range of forms in radular and shell morphology. This is reflected in the number of already described genera and their synonyms. Moreover the infra-specific variation is rather high in some species. Therefore a certain precaution is needed when determining deep water species and splitting them in different genera. The conclusions of Bouchet & Warén (1986) about the tentatively placement of a number of species in *Eosipho* and *Kapala* is therefore correct. In the present paper we follow this opinion by the tentatively placement of this new species in *Paratetifusus*. The placement in the genus *Americominella* Klappenbach & Ureta, 1972 seems not advisable to us because of different protoconch morphology, as well as because of its subantarctic range. Further research on these deep water species will document if their resemblance is superficial (the result of convergence) or real (phylogenetic relationship).

SYSTEMATICS

Family **BUCCINIDAE** Rafinesque, 1815

Genus *Paratetifusus* Kosuge, 1967

Paratetifusus, Kosuge (1967: 62), type species: *Phymorhynchus tenuis* Okutani, 1966, from 34°57'N.-139°21'E., 1470-1500 m, Sagami Bay, Japan.

Paratetifusus dedonderi n.sp.

Figs. 1-9

Type material

Philippine Islands, Balicasag Island, in 120-250 m, in tangle nets. Holotype, 10.5 x 4.6 mm, Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels, Belgium, nr. 490. I.G.nr. 29.260.

Paratypes: paratype 1, coll. F. Dedonder & R. Goethaels, Belgium; paratype 2, K. Fraussen nr. 3205, Belgium; paratype 3, Muséum national d'Histoire naturelle, Paris, France; paratypes 4-6, coll. F. Dedonder & R. Goethaels, Belgium; paratype 7, National Museum of Natural History, Smithsonian Institution, Washington, U.S.A. **Balicasag Island, in 420-500 m, in tangle nets.** Paratypes 8-11, coll. G. T. Poppe, Belgium; paratype 12, coll. K. Fraussen nr. 3206-3207, Belgium; paratype 13, coll. R. Hadorn, Switzerland; paratype 14, University of California, department of geology, Davis, CA, U.S.A. **Aliguay Island, in 150-300 m, trawled.** Paratypes 15-17, coll. F. Dedonder & R. Goethaels, Belgium. **Balicasag Island.** Paratype 18, The Natural History Museum, London, England.

Type locality

Off Balicasag Island, near Panglao, Bohol, central Philippine Islands, in 120-250 m.

Distribution and habitat

Known only from Balicasag Island and Aliguay Island, central Philippine Islands. Bathymetric range between 150 and 420 m with certainty, on sandy-muddy bottom with volcanic mud and/or volcanic and coral rubble.

Description

Shell small (up to 14 mm high), snow-white, semi-transparent, thin, fragile, sculpture reticulate. Shape fusiform, slender with high spire and short siphonal canal.

Protoconch paucispiral, smooth, with about 1.15-1.25 well rounded whorls (Fig. 3).

Teleoconch whorls, 4 or 5 in number, convex, shoulder slightly angulate. Suture rather deep.

On first teleoconch whorl 14 high and sharp axial ridges with broad interspaces; 14-16 on penultimate whorl, 15-19 on body whorl.

On spire whorls 3 strong, rounded, high spiral ridges with broad interspaces; 6 or 7 on body whorl. 6-10 fine spiral ridges on siphonal canal. Upper spiral ridge on shoulder giving the shell a slightly angulate shape. Fourth spiral ridge at lower suture, partly hidden under the following whorl. Presence of 4 weak and low spiral threads between suture and adapical spiral ridge. Aperture semi-ovate, outer lip broad, rounded. Paratype 12 showing 6 strong knobs inside outer lip, each knob corresponding with interspace: lowest knob on beginning of siphonal canal. Siphonal canal straight, open, short. Aperture and siphonal canal about 1/2 of total shell length. Columella curved, smooth, formed by resorption of sculpture and outer shell layer.

Periostracum thick, yellowish or dark brown, copying sculpture, consequently having a reticulate appearance. Each intersection between spiral and axial sculpture ornamented with short hair, resulting in a hirsute appearance. Hairs on adapical spiral cord often bicuspid.

Operculum corneous, pale yellowish-brown, oval with terminal nucleus.

Radula typically buccinid. Central tooth tricuspid, the central cusp slightly larger. Lateral teeth tricuspid, with broad base, outer cusp largest, inner cusp smallest.

Comparison

Pararetifusus dedonderi n.sp. is characterized by a high spire and a strong, reticulate sculpture in combination with a small, smooth, paucispiral protoconch and a reticulate and hirsute periostracum.

Pararetifusus tenuis (Okutani, 1966) resembles *P. dedonderi* much in spiral sculpture, protoconch and radula. The lateral teeth have equally sized cusps in *P. tenuis*, while their size is variable in *P. dedonderi*. The shell of *P. tenuis* differs by the absence of axial sculpture, by a lesser number of teleoconch whorls (3 or 4 instead of 4 or 5), and by a thin and smooth periostracum.

Americominella duartei Klappenbach & Ureta, 1972 exhibits a remarkable resemblance with *P. dedonderi*. Sculpture and periostracum are virtually the same. The radula is quite identical with the exception of the central tooth which has a concave base in *A. duartei*

(instead of rectangular) and the broader base of the lateral teeth. *A. duartei* differs at once in having a broad, depressed protoconch consisting of 1.50 whorls, and differs considerably in range (subantarctic, off Argentina) and size (up to 90 mm). Some species belonging to Muricidae, Ranellidae and Turridae can look similar to *P. dedonderi* but have a different radular morphology.

Etymology

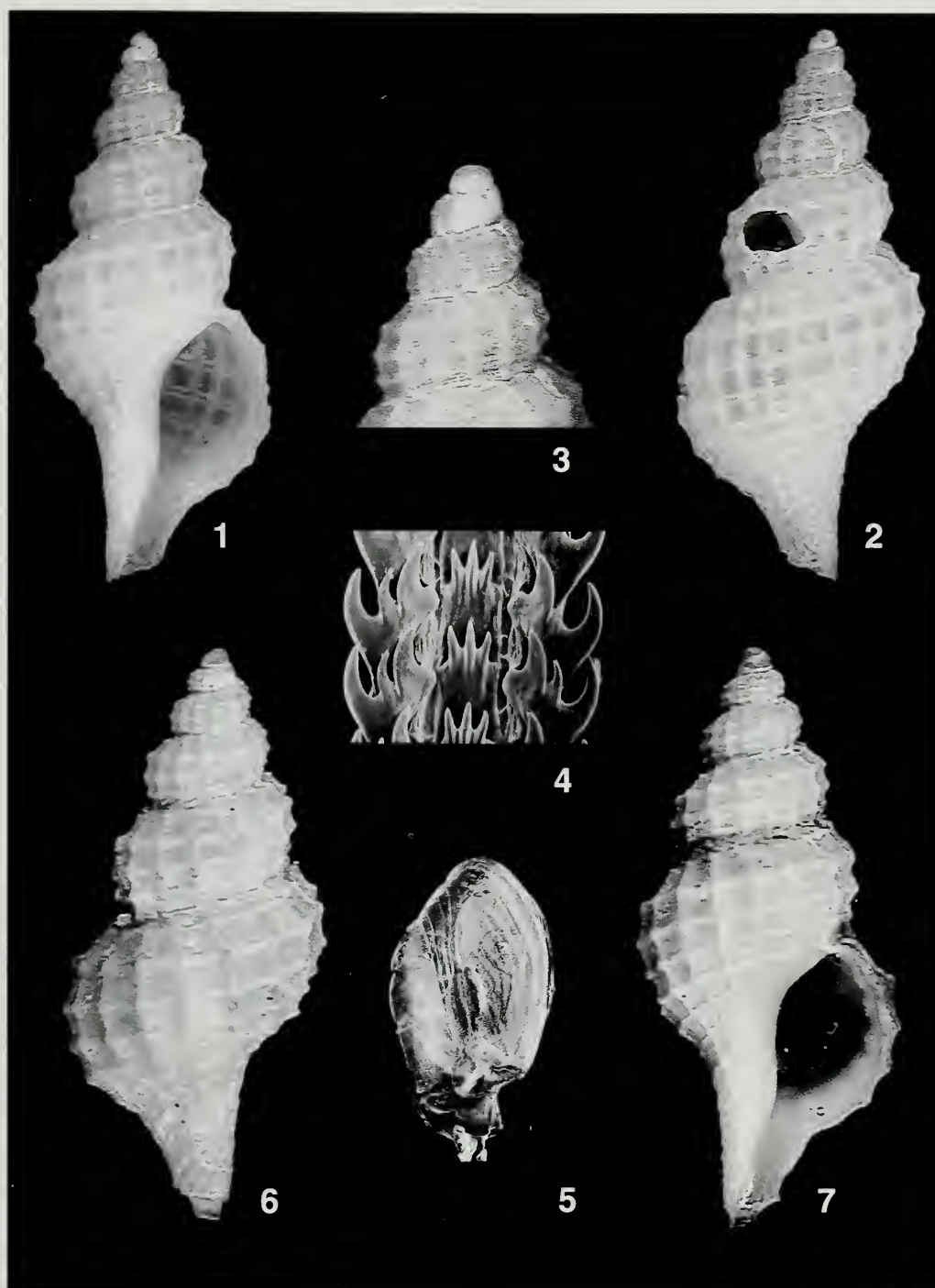
This new species is dedicated to my friend Fernand De Donder (Belgium), together with Rika Goethaels he collected most of the type material.

ACKNOWLEDGEMENTS.

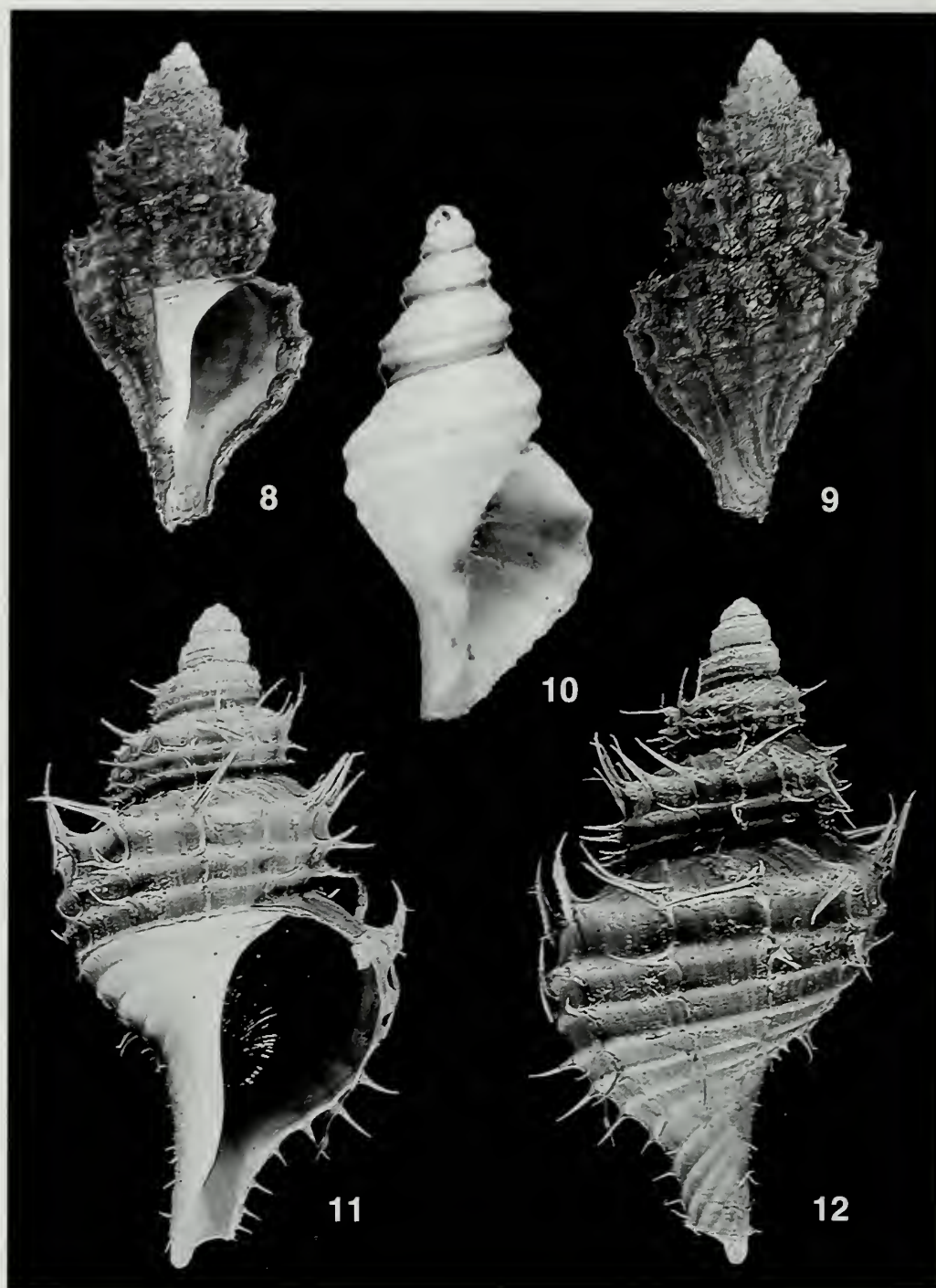
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REFERENCES

- Bouchet, P. & Warén, A., 1986. Mollusca Gastropoda: Taxonomical notes on tropical deep water Buccinidae with descriptions of new taxa. In: Résultats des Campagnes MUSORSTOM. I & II. Philippines, tome 2. *Mém. Mus. natn. Hist. nat.*, 1985, sér. A, Zool., 133: 457-499.
- Klappenbach, M. A. & Ureta, E. H., 1972. Nuevo genero y nueva especie de la familia Buccinidae de aguas Uruguayas y Argentinas. *Com. zool. Mus. hist. Nat. Montevideo*, 10(134): 1-6.
- Kosuge, S., 1967. On the transfer of "*Phymorhynchus*?" *tenuis* Okutani, 1966 to the family Buccinidae. *Venus*, 25: 59-64.
- Okutani, T., 1966. Archibenthal and abyssal Mollusca collected by the R. V. Soya-Marui from Japanese waters during 1964. *Bull. Tokai Reg. Fish. Lab.*, 46: 1-35.
- Okutani, T., Kubudera, T., Kurozumi, T., Saito, H., Sasaki, T., Tsuchida, E., Tsuchiya, K., Hasegawa, K., Hamatani, I., Hayami, K., Hori, S. & Matsukuma, A., 2000. *Marine Mollusks in Japan*. Takahashi Okutani, Tokai University Press. pp. 1173.



Figures 1-7. *Pararetifusus dedonderi* sp. nov., Philippine Islands,
1-5: holotype, 10.5 mm; 3: apex, figured height: 3.1 mm; 4: radula; 5: operculum; 6-7: paratype 12, 11.6 mm;



Figures 8-12.

8-9: *Pararetifusus dedonderi* sp. nov., Philippine Islands, paratype 2, 14.1 mm; **10:** *Pararetifusus tenuis* Okutani, 1966, after Okutani et. all. 2000, pl. 232, fig. 69; **11-12:** *Americominella duartei* Klappenbach & Ureta, 1972, 61.5 mm, Argentina, Falkland Islands, dredged in 460 m.